

FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT OF THE UPGRADE OF THE ANDREWS AIR FORCE BASE AIRFIELD SECURITY SYSTEM

INTRODUCTION

The 89th Security Forces Squadron (SFS) has identified a need to construct an upgraded security system at Andrews Air Force Base (AFB) in Prince George's County, Maryland. Andrews AFB is home to the 89th Airlift Wing, which provides worldwide airlift and logistical support for the President of the United States, the Vice President, cabinet members, and other high-ranking United States and foreign officials and dignitaries; the base supports the flight operations of more than 100 aircraft. Currently, the fencing surrounding the airfield is incomplete; some buildings border directly on the flightline and can be used to access both the flightline and airfield; surveillance of the airfield and perimeter areas is sometimes encumbered by trees and other obstructions; and there are no sensors for detecting the presence of chemical, biological, or radiological agents. The proposed security upgrades would involve continuing and completing the existing airfield perimeter fencing; installing new entry control points; installing utility poles to support surveillance cameras around the airfield; clearing a small area of forestland to establish a clear sightline for the surveillance equipment; installing chemical, biological, and radiological sensors on existing pieces of infrastructure; installing locking steel grates on existing culverts in proximity to the airfield; and constructing surveillance command and control rooms. The Proposed Action (Alternatives 1 and 2) and the No Action Alternative were analyzed in the attached Environmental Assessment (EA) in accordance with the National Environmental Policy Act.

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The proposed action is needed to provide timely notification of unauthorized entry onto the flightline, airfield, or hangars or the presence of chemical, biological, or radiological threats to airfield operations at Andrews Air Force Base. This need is directly related to the unique mission of the 89th AW, which is a frequent embarkation/disembarkation location for U.S. leaders, foreign heads of state, and other military and diplomatic officials and dignitaries. While there are controls on personnel and visitors entering the base, access to the airfield, hangars, and associated infrastructure is not similarly restricted and controlled. With implementation of the proposed action, security forces at Andrews AFB would be provided with timely and advance notification of unauthorized entry onto the airfield or the release of chemical, biological, or radiological agents.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Alternative 1 (the proposed action and preferred alternative) is the upgrade of the airfield security system with additional fencing enclosing the hangars. The proposed action

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involves the addition of new fencing to completely enclose the airfield; installation of new entry control points; maintenance of existing access gates; installation of utility poles for camera mounting; installation of locking steel gates on existing culverts; installation of chemical, biological and radioactive sensors; vegetation management; debris disposal; and, environmental controls.

Alternative 2 only differs from Alternative 1 in that the additional fencing would not enclose the building and hangars immediately adjacent to the airfield that are currently outside the existing fence line. No additional entry control points would be required under this alternative.

NO ACTION ALTERNATIVE

The no action alternative is defined as not installing any upgrades to the existing airfield security system at Andrews AFB. As a result, the airfield and associated airfield facilities, as well as distinguished users of the 89th AW air transport system, would continue to be potentially vulnerable to potential security threats.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

As part of the NEPA process, reasonable alternatives to the Proposed Action must be considered.

Install Perimeter Fencing Only. This alternative would provide for completion of the perimeter fencing at the airfield, but not the installation of surveillance cameras or the chemical, biological, radiological threat sensors. Since this alternative would not fulfill the identified need for advance warning of unauthorized intrusions or detection of chemical or biological threats on the Andrews AFB airfield or flightline it was eliminated as a viable alternative.

Install Security Upgrades on the Existing Fence on the North and South of the Airfield, and on Existing Hangars. This alternative was eliminated as a viable alternative because it would not complete the existing airfield perimeter fencing and existing fencing and allow an unobstructed view of the airfield perimeter.

Mount Security System Upgrades at Existing Entry Control Points (ECPs). Another alternative is to mount security system upgrades at existing ECPs. However, these ECPs are located are too far from the airfield to allow surveillance of the airfield, eliminating this as a viable alternative.


Therefore, other alternatives were initially considered, but eliminated from further consideration because they were not found to be viable alternatives.

ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Analysis performed in the addressed the potential effects on land use, vehicular transportation, noise, air quality, water quality, hazardous materials and waste management, socioeconomics, topography and geology, and cultural resources. The analysis indicates that implementing the Preferred Alternative (Alternative 1) would have no significant direct, indirect or cumulative impacts on the quality of the human or natural environment.

FINDING OF NO SIGNIFICANT IMPACT

After review of the EA prepared in accordance with the requirements of NEPA, the Council on Environmental Quality regulations, and the Environmental Impact Analysis Process, 32 Code of Federal Regulations Part 989, as amended, I have determined that the Preferred Alternative (Alternative 1), which involves the upgrade of the airfield security system with the additional fencing enclosing the buildings and hangars adjacent to the airfield, would not have a significant impact on the quality of the human or natural environment and, therefore, the preparation of an Environmental Impact Statement is not required. This decision has been made after taking into account all submitted information, and considering a full range of practical alternatives that would meet project requirements and are within the legal authority of the USAF.



DAVID S. GRAY
Brigadier General, USAF
Commander, 89th Airlift Wing

15 Dec 04
Date

DRAFT ENVIRONMENTAL ASSESSMENT



UPGRADE OF THE ANDREWS AIR FORCE BASE AIRFIELD SECURITY SYSTEM



Prepared for:



**DEPARTMENT OF THE AIR FORCE
Air Force Center for Environmental Excellence**

Prepared by:



**ECOLOGY AND ENVIRONMENT, INC.
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Arlington, VA 22209**

November 2004

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Cover Sheet

Environmental Assessment for the Upgrade of the Andrews Air Force Base Airfield Security System

Lead Agency: Department of the Air Force

Proposed Action: Airfield Security System Upgrade at Andrews Air Force Base

Written comments and inquiries regarding this document should be directed to: Mr. Keith Harris, 89th CES/CEV, 3479 Fetchet Avenue, Andrews AFB, MD 20762-4803, (301) 981-1653.

Report Designation: Environmental Assessment (EA)

Abstract: The 89th Security Forces Squadron (SFS) has identified a need to construct an upgraded security system at Andrews Air Force Base (AFB) in Prince George's County, Maryland. Andrews AFB is home to the 89th Airlift Wing, which provides worldwide airlift and logistical support for the President of the United States, the Vice President, cabinet members, and other high-ranking United States and foreign officials and dignitaries; the base supports the flight operations of more than 100 aircraft. Currently, the fencing surrounding the airfield is incomplete; some buildings border directly on the flightline and can be used to access both the flightline and airfield; surveillance of the airfield and perimeter areas is sometimes encumbered by trees and other obstructions; and there are no sensors for detecting the presence of chemical, biological, or radiological agents. Consequently, the proposed action is needed to provide timely notification of unauthorized entry onto the flightline, airfield, or hangars or the presence of chemical, biological, or radiological threats to airfield operations at Andrews AFB. The proposed action involves continuing and completing the existing airfield perimeter fencing; installing new entry control points; emplacing utility poles to support surveillance cameras around the airfield; clearing a small area of forestland to establish a clear sightline for the surveillance equipment; installing chemical, biological, and radiological sensors on existing pieces of infrastructure; installing locking steel grates on existing culverts in proximity to the airfield; and constructing surveillance command and control rooms.

The EA describes a preferred alternative (Alternative 1), a modified security system upgrade involving less infrastructure construction (Alternative 2), and a no-action alternative (Alternative 3). The EA assesses potential impacts from each alternative to land use; vehicular transportation; hazardous materials and waste management; air quality; noise; socioeconomic resources; topography, geology, and soils; water resources; biological resources; and cultural resources.

The EA demonstrates that, with appropriate mitigation, none of the alternatives would result in significant environmental impacts.

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Install Security Upgrades on the Existing Fence on the North and South of the Airfield, and on Existing Hangars. This alternative was eliminated as a viable alternative because it would not complete the existing airfield perimeter fencing, nor allow an unobstructed view of the airfield perimeter.

Mount Security System Upgrades at Existing Entry Control Points (ECPs). Another alternative is to mount security system upgrades at existing ECPs. However, since these ECPs are located too far from the airfield to allow surveillance of the airfield, this option was eliminated as a viable alternative.

Therefore, while other alternatives were initially considered, they were eliminated from further consideration because they were not found to be viable alternatives.

ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Analysis performed in the EA addressed the potential effects on land use; vehicular transportation; hazardous materials and waste management; air quality; noise;

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JOHN R. RANCK, Colonel, USAF

Vice Commander, 89th Airlift Wing

Date

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1 Purpose and Need for Action

1.1 Introduction

The 89th Security Forces Squadron (SFS) proposes to upgrade its existing airfield security system as part of Force Protection/Anti-Terrorism (FP/AT) initiatives being implemented at Andrews Air Force Base (AFB). The proposed upgrades are part of a pilot program designed to increase the U.S. Air Force's ability to safely secure bases throughout the United States. The action is needed to provide timely and advance notification of unauthorized entry onto the flightline, airfield, or hangars, or the presence of chemical, biological, or radiological threats to airfield operations. By eliminating the element of surprise, security forces would be able to deploy forces to assess, report, deter, deny, delay, track, and otherwise neutralize intruders. This Environmental Assessment (EA) has been prepared to analyze the potential impacts associated with the proposed action in accordance with the:

- National Environmental Policy Act (NEPA) of 1969, 42 United States Code (USC) 4231 et seq., as amended in 1975;
- Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) §§ 1500-1508; and
- Environmental Impact Analysis Process, 32 CFR § 989.

Andrews AFB is a 4,346-acre installation located approximately 10 miles southeast of Washington, D.C. in Prince George's County, Maryland (Figure 1-1). Established in 1947, the base serves as a travel and support center for the President of the United States and other distinguished Federal and foreign civilian and military dignitaries through its main tenant, the 89th Airlift Wing (89 AW), part of the U.S. Air Force Air Mobility Command (AMC). Andrews AFB also hosts more than 60 tenant units, including (among others) the: Air Force Reserve Command 459th Airlift Wing (USAFRC 459 AW), Air National Guard (ANG) Readiness Center, District of Columbia Air National Guard (DCANG) 113th Wing, U.S. Army Priority Air Transport (PAT), the Civil Air Patrol (CAP), the Maryland State Police, and the Naval Air Facility (NAF) Washington.

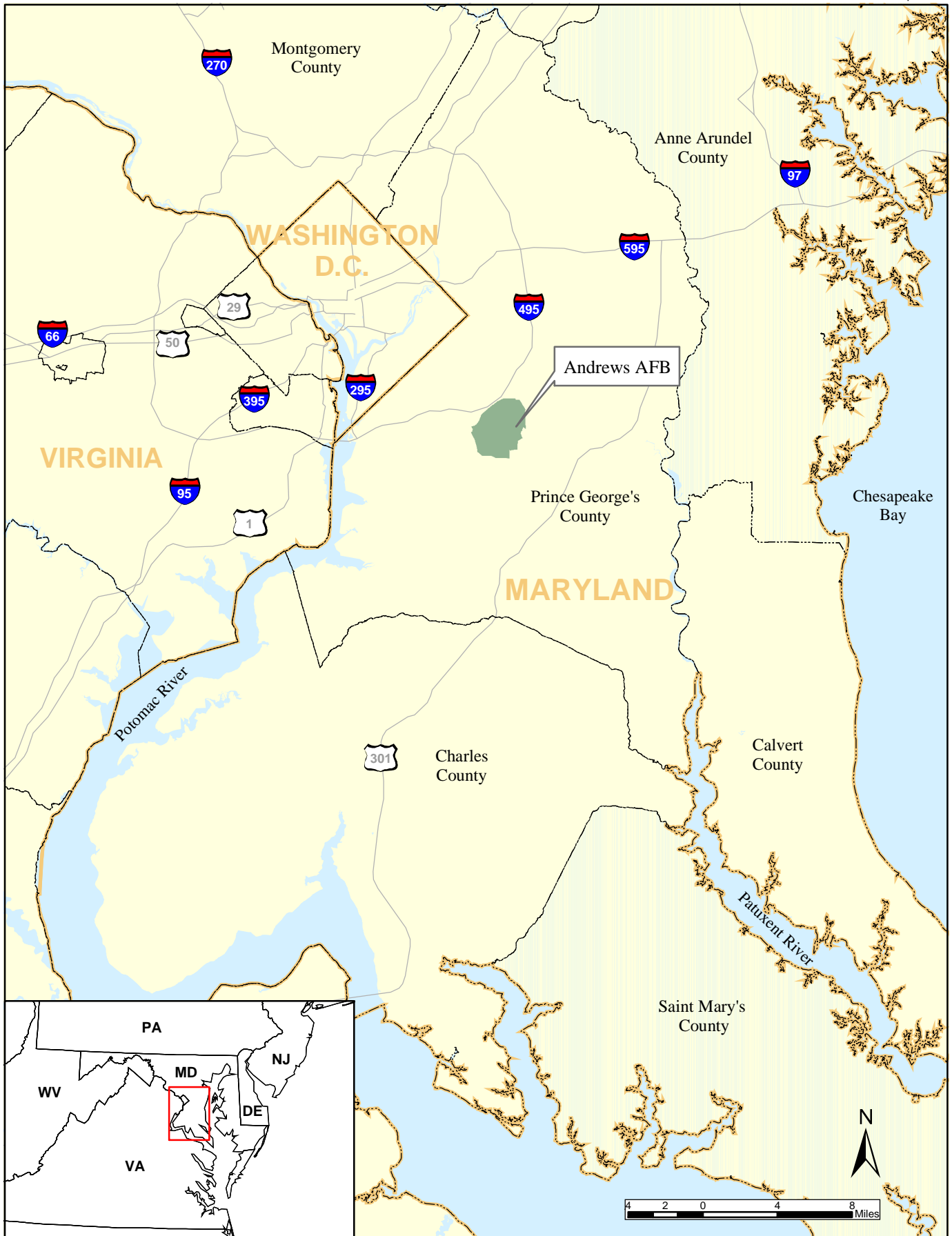
1.2 Need for Action

The proposed action is needed to provide timely notification of unauthorized entry onto the flightline, airfield, or hangars or the presence of chemical, biological, or radiological

threats to airfield operations at Andrews Air Force Base. This need is directly related to the unique mission of the 89th AW, which is a frequent embarkation/disembarkation location for U.S. leaders, foreign heads of state, and other military and diplomatic officials and dignitaries. While there are controls on personnel and visitors entering the base, access to the airfield, hangars, and associated infrastructure is not similarly restricted and controlled. Currently, the fencing surrounding the airfield is incomplete,; some buildings border directly on the flightline and can be used to access both the flightline and airfield; surveillance of the airfield and perimeter areas is sometimes encumbered by trees and other obstructions; and there are no sensors for detecting the presence of chemical, or biological, or radiological agents. As a result, there is no means of delaying, deterring, or denying unauthorized individuals from accessing the airfield and vicinity, for tracking unauthorized intruders, or for detecting potential chemical, biological, or radiological threats. The proposed action would rectify these deficiencies by:

- Continuing and completing the existing airfield perimeter fencing and installing new entry control points, where necessary.
- Installing surveillance cameras around the airfield. These closed circuit cameras would be mounted on existing poles, new utility poles, buildings, or along the fence line. Central command and control rooms would be established within Buildings 1220 and 1281.
- Clearing approximately 0.35 acres of forestland on the west side of the airfield to establish a clear sightline for the surveillance cameras.
- Installing chemical, biological, or radiological sensors along the perimeter fencing, at the airfield access gates, and adjacent to Buildings 1220 and 1281.
- Constructing building additions, and performing interior renovations, to Buildings 1220 and 1281.

With implementation of the proposed action, security forces at Andrews AFB would be provided with timely and advance notification of unauthorized entry onto the airfield or the release of chemical, biological, or radiological agents. As a result, a potentially hostile individual or force would no longer have the element of surprise on its side. Andrews AFB security forces would then be able to quickly deploy forces to assess, report, deter, deny, delay, track, and otherwise neutralize intruders before there was a risk to the safety of the President of the United States or other distinguished Federal and foreign civilian and military dignitaries who frequently use the base for air transportation worldwide.



Source: ESRI 2002

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Figure 1-1: Regional Location, Andrews AFB

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1.3 Objectives for the Action

The primary objectives of the action are to eliminate the potential for unauthorized intrusion onto the airfield at Andrews AFB, and to provide for the detection of chemical, biological, or radiological agents. Accordingly, the proposed action includes the installation of a complete perimeter fence around the airfield; installation of new airfield access gates (vehicle and pedestrian); mounting of closed-circuit surveillance cameras, and installation of chemical and biological sensors along the perimeter fencing, at the airfield access gates, and adjacent to Buildings 1220 and 1281. In addition, a command and control room for monitoring the closed circuit surveillance cameras would be constructed as an addition to Buildings 1220 and 1281.

1.4 Scope of EA

This EA evaluates the potential impacts of activities involved in securing the perimeter of the airfield and providing surveillance and intrusion detection and threat sensors for the protection of airfield infrastructure and flight line activities at Andrews AFB. Potential impacts to the human and natural environment could be short-term, long-term, or cumulative. Consistent with the local interest of this EA and homeland security, Andrews AFB will provide an appropriate review and comment period before finalizing the decision on the action.

Relevant resources evaluated in this EA include land use; vehicular transportation; hazardous materials and waste management; air quality; noise; socioeconomics; topography, geology, and soils; water resources; biological resources; and cultural resources. The principal potential environmental effects of the action would be those associated with construction activities involving heavy equipment operations.

1.5 Decision to be Made

The Base Civil Engineer and Chairman of the Environmental Protection Committee at Andrews AFB would be responsible for deciding which alternative to adopt. The decision will be to either implement the proposed action or select a reasonable alternative, including No Action. If the No Action alternative is selected, the existing airfield security system will not be upgraded to include perimeter fencing and the installation of surveillance and chemical/, biological, or radiological agent sensors. The decision will be based on the findings contained in this EA.

1.6 Applicable Regulatory Requirements and Required Coordination

Table 1-1 lists each environmental permit, regulatory compliance requirement, and regulatory agency consultation requirement for each of the three alternatives evaluated in the EA. For each requirement, the table provides the regulatory citations, administering agency, and a brief description. The table also indicates which sections of the EA contain technical information relevant to each of the requirements.

Table 1-1

Environmental Permitting, Regulatory Compliance, and Coordination Requirements

Statute	Requirement	Agency	Description	Applicability			Section
				Alt. 1	Alt. 2	No-Action	
Clean Air Act (42 USC 7401 et seq.)	Air Conformity Determination (40 CFR 93)	Maryland Department of the Environment (MDE)	Federal agencies must demonstrate that actions in nonattainment areas conform to the applicable State Implementation Plan.	X	X		4.4
Clean Water Act (33 USC 1251 et seq.)	National Pollutant Discharge Elimination System (NPDES) Permit (40 CFR 122 et seq.; COMAR 26.08.01 et seq.)	MDE (Delegated from the U.S. Environmental Protection Agency [EPA])	Approval under a General NPDES Permit for Construction Activity is required for stormwater discharges from new construction activities disturbing 1 acre or more.	X	X		4.8
National Historic Preservation Act (16 USC 470 et seq.)	Section 106 Consultation (36 CFR 800)	Maryland Historic Trust (State Historic Preservation Officer [SHPO] for Maryland)	Actions sponsored, funded, or permitted by Federal agencies must be reviewed by the SHPO for possible impacts to historic or archaeological resources eligible or potentially eligible for the National Register of Historic Places (NRHP).	X	X		4.10
Endangered Species Act (16 USC 688 et seq.)	Section 7 Consultation (50 CFR 17)	U.S. Fish and Wildlife Service (FWS)	Actions sponsored, funded, or permitted by Federal agencies must be reviewed by the FWS for possible impacts to threatened or endangered species.	X	X		4.9
Maryland Waterway Construction Act (Environmental Article 5-501 to 5-514, ACM)	Waterway Construction Permit	MDE	Required for activities in waterways involving construction or repair of dams and reservoirs, bridges and culverts, and utility lines, and for all projects involving excavation, filling, or channelization of a waterway.	X	X		4.8

Table 1-1**Environmental Permitting, Regulatory Compliance, and Coordination Requirements**

Statute	Requirement	Agency	Description	Applicability			Section
				Alt. 1	Alt. 2	No-Action	
Environmental Article Title 4, Subtitle 1, ACM	Soil Erosion and Sediment Control Plan Approval (COMAR 26.17.01)	MDE	Required for actions that disturb greater than 5,000 square feet of land.	X	X		4.7 and 4.8
Environmental Article Title 4, Subtitle 2, ACM	Stormwater Management Plan Approval (COMAR 26.17.02)	MDE	Required for actions that disturb greater than 5,000 square feet of land.	X	X		4.8

2 Description of Alternatives Including the Proposed Action

2.1 Introduction

This Section describes the alternatives the Air Force has analyzed to accomplish the action. Alternative 1 (proposed action), and Alternative 2, as well as the No-Action Alternative, are discussed here; there is also a discussion of the alternatives that the Air Force has eliminated, because they were not reasonable. Reasonable alternatives were identified as those alternatives meeting the underlying purpose and need for action; highly speculative or remote alternatives were not considered further. The No Action alternative is carried forward for analysis in accordance with NEPA § 1502.14 (d).

2.2 Selection Criteria for Alternatives

To be considered a viable alternative, the upgrade of the existing airfield security system would need to comply with Air Force planning and design manuals and design standards. The documents listed below provide specifications and standards for the alternatives:

- The Air Force Installation Force Protection Guide.
 - Air Force Instruction (AFI) 31-101, Air Force Installation Security Program.
 - Air Force Handbook 32-1084, Facility Requirements.
-

2.3 Alternatives Considered but Eliminated from Detailed Study

Several alternatives were considered but eliminated from detailed study as follows:

- **Install perimeter fencing only.** This alternative would provide for completion of the perimeter fencing at the airfield, but not the installation of surveillance cameras or the chemical, biological, or radiological threat sensors. While unauthorized intrusion onto the airfield would be deterred by the presence of the fence, an intruder could still climb the fence or cut it to obtain access to the airfield. There would be no detection of intrusion because there would be no surveillance cameras. An intruder could also release chemical, biological, or

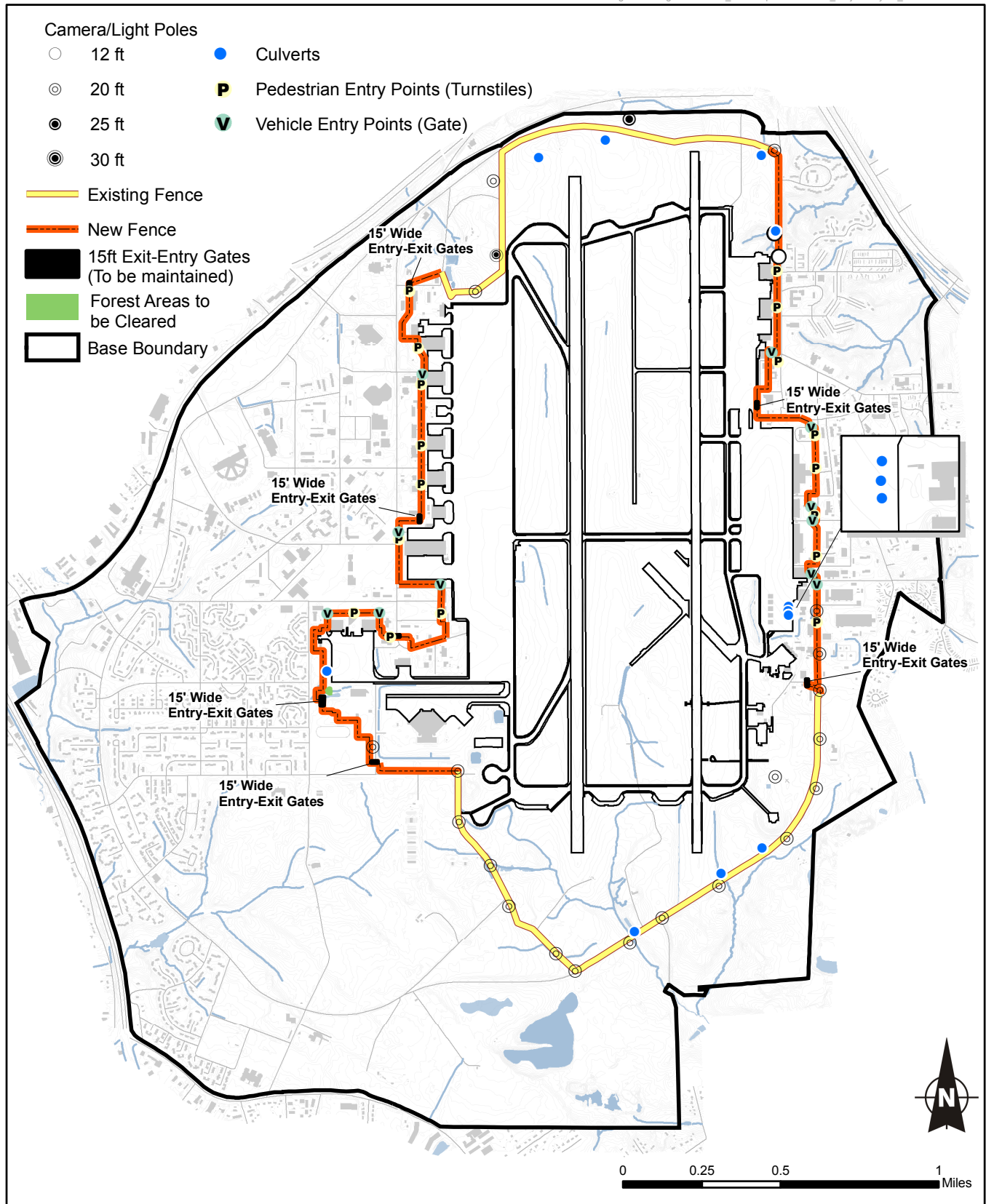
radiological agents and there would be no way to detect their presence in the area. This alternative would not fulfill the identified need for advance warning of unauthorized intrusions onto, or detection of chemical, biological, or radiological threats to, the Andrews AFB airfield or flightline.

- **Install security upgrades on the existing fence to the north and south of the airfield, and on existing hangars.** While this alternative would virtually eliminate any impact of an upgraded security system on the base's natural resources and land uses (except during the brief period of installation), it was dismissed because: (1) the existing fencing is incomplete and, without continuous fencing around the entire perimeter of the airfield, unauthorized intrusion could not be denied or deterred; and (2) existing fencing and hangars either do not have sufficient height or are not located in the best locations to provide an unobstructed view of the airfield perimeter. Therefore, this alternative would not fulfill the identified need for advance warning of unauthorized intrusions onto, or detection of chemical, biological, or radiological threats to, the Andrews AFB airfield or flightline.
- **Mount security system upgrades at existing entry control points (ECPs).** Existing ECPs are located at the perimeter of the base, not at the perimeter of the airfield. Mounting security systems upgrades, including surveillance cameras at the ECPs, would not deter or deny unauthorized access to the airfield and flightline activities because the existing fencing would remain incomplete and without continuous fencing around the entire perimeter of the airfield unauthorized intrusion could not be prevented. Moreover, the ECPs are too far from the airfield to allow surveillance of the airfield. Although the installation of chemical/biological sensors at the ECPs would benefit the base as a whole, installation of these sensors at these locations still would not prevent the release of chemical and biological agents at or around the airfield. Consequently, this alternative was dismissed because it would not fulfill the necessary security needs at Andrews AFB to provide advance warning for intrusions or detection of chemical or biological threats on the Andrews AFB airfield or flightline.

2.4 Description of Alternatives

2.4.1 Alternative 1 - Upgrade the Airfield Security System With New Fence Enclosing Hangars

Alternative 1 would involve construction and installation activities to upgrade the existing airfield security system. Figure 2-1 shows the layout of the proposed system. The upgraded security system would involve continuing and completing the existing airfield perimeter fence to restrict access to the airfield or buildings and hangars adjacent to the airfield, except through the new or existing access gates. Access to parking spaces



Source: Andrews AFB 2004

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Figure 2-1: Layout of the Proposed Airfield Security System, Andrews AFB

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within the completed fenced area would be restricted to military and civilian personnel with proper flightline credentials. As shown in Figure 2-1, the existing airfield perimeter fence borders undeveloped areas along the north and south ends of the airfield. The proposed new connecting fence would be installed adjacent to developed areas bordering the east and west sides of the airfield. The upgraded security system would include the following:

- Adding approximately 24,590 feet of new fencing to completely enclose the airfield. This fencing will be chain link fence except in areas frequented by distinguished visitors, where ornamental fencing will be installed. Ornamental fencing will be installed in the vicinity of hangars 6 and 7, 8 and 9, and Building 3029.
- Installing 35 entry control points, consisting of 17 pedestrian access turnstiles and 18 vehicle access gates, in areas where the hangars would be enclosed by fencing on the eastern and western sides of the airfield. The pedestrian turnstiles would be approximately 650 feet apart. Ornamental turnstiles would be installed in distinguished visitor areas.
- Maintaining the locations of existing 15-foot access gates.
- Installing 26 utility poles, including one 30-foot light pole, one 25-foot light pole, two 7-foot radar mounts, two 12-foot light poles, and 20 20-foot light poles, along the fence line, and mounting 19 infrared cameras and 88 Envirodome cameras on the 26 utility poles.
- Adding locking steel grates on the upstream side of the existing 12 culverts associated with the existing airfield perimeter fence to prevent unauthorized access to the airfield via stream channels.
- Maintaining a 15-foot wide vegetation management corridor along the entire length and on both sides of the airfield perimeter fence for a total of a 30-foot wide vegetation management corridor.
- In addition, chemical, biological, radiological sensors would be installed in the vicinity of the airfield access gates and adjacent to Buildings 1220 and 1281.
- The command and control rooms for monitoring the closed circuit surveillance cameras would be housed in additions made to Buildings 1220 and 1281. The additions will encompass approximately 750-square-feet of previously developed surfaces.
- Vegetation will be cleared in a small area on the west side of the airfield to maintain a clear line of site for the surveillance cameras. The area to be cleared is approximately 0.35 acres and is shown on Figure 2-1.

Approximately 22 independent 750-kilowatt (kW) power sources would be installed immediately adjacent to the airfield perimeter fence and operated to permit the security

system to remain functional in the event of a power failure. Connecting and power and communications cables would be installed in shallow trenches (approximately 2-3 feet deep).

Construction activities would be conducted in accordance with applicable Air Force safety regulations and standards prescribed by the Air Force Occupational Safety and Health (AFOSH) requirements (AFI 91-301), including:

- Vegetation Management.
- Debris Disposal.
- Environmental Controls.

Vegetation Management

In the areas where perimeter fencing is to be added around the airfield, trees, shrubs, and vegetation would be managed in a 5-foot wide corridor along the entire length and on both sides of the fence. This vegetation management will be consistent with current maintenance activities associated with the existing airfield fencing. All vegetation growing on or through the fence would be managed using hand-held equipment or with the application of an approved herbicide. Where necessary, vegetation will be removed in order that cameras fixed to installed poles will have a clear view of the area they are monitoring. The vegetation will be removed using hand-held equipment or with the application of an approved herbicide.

Debris Disposal

All timber removed during the proposed security system upgrade, regardless of its economic value, would be ground or chipped and the mulch spread along the clearance area.

Environmental Controls

Prior to initiation of construction activities, plans and documents that provide environmental controls would be prepared by the selected contractor. These plans and documents would be submitted to the contracting officer and Civil Engineering Environmental Flight, Restoration office (89 CEV/CEVR), at Andrews AFB. Environmental measures under the proposed action would be designed to control erosion and sedimentation and provide for stormwater management.

To prevent siltation from releases of sediment (soil) from active construction sites, an erosion control plan would be prepared and submitted to MDE for approval in accordance with Maryland Sediment Control Guidelines for State and Federal Projects (MDE 1990). Plan approval is required for any construction activity that disturbs 5,000

square feet or more of soil, or results in the excavation of 100 cubic yards or more of soil. Areas disturbed during construction will primarily be narrow strips of land running parallel to the airfield perimeter fence and small, isolated areas associated with the utility pole plants. Best management practices (BMPs) will be used to control erosion and sedimentation, including a silt fence and stabilized construction entrances at various entry/exit locations. Disturbed areas would be hydroseeded immediately following construction to re-establish ground cover. In addition, BMPs would be used in the construction staging area to ensure the proper level of silt control.

Prior to implementation of the proposed action, a Stormwater Management Plan, as required by the Maryland Department of the Environment, would be submitted to MDE. Approval of MDE is also required for projects disturbing 5,000 square feet or more of land and can be obtained at the same time as the erosion and sedimentation control approval. Since the proposed project will not result in the construction of any additional impervious land surfaces at the base, and since it only involves relatively minor ground disturbances during construction activities, there is no need for detailed additional permanent stormwater control structures to be designed.

Prior to construction activities, full coordination with the 89th Civil Engineering Squadron, Environmental Flight, Planning and Restoration offices (89 CESCEVP and CEVR respectively) would be required. MDE coordination also would be required to meet State regulatory requirements. Coordination with 89 CES/CEVR would be conducted to ensure that the proposed activities are not in conflict with any existing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Resource Conservation and Recovery Act (RCRA) activities that could place personnel or the environment at risk. Stockpiling and disposal of soil materials would be conducted in accordance with applicable State and Federal regulations, and would be addressed in the planning and implementation stages of the project.

Although disturbance of cultural resources is not expected as a result of the proposed action, procedures for stopping work in the event that cultural resources might be impacted are included. Discovery of cultural resources would be reported to the 89 CES/CEVP natural and cultural resources manager.

2.4.2 Alternative 2 - Upgrade the Airfield Security System with New Fence Not Restricting Direct Access to Hangars

Alternative 2 would be similar to Alternative 1 in that the airfield perimeter fence would be continued and the same number of poles would be emplaced, the same number of surveillance cameras would be mounted, and command and control rooms for monitoring the closed circuit surveillance cameras would be constructed as additions to Buildings 1220 and 1281. However, the perimeter fencing would differ in that it would not enclose the buildings and hangars immediately adjacent to the airfield that are currently outside the existing fence line. As a result, unlike the situation that would exist with Alternative 1, there would be no additional parking spaces where access was restricted to military

and civilian personnel with appropriate flightline credentials. The total length of fence to be added would equal approximately 18,300 feet for Alternative 2 rather than the 24,590 feet of fence to be added in Alternative 1. No new pedestrian turnstiles or vehicle gates would be added under this alternative, nor would any existing parking spaces be eliminated. Chemical, biological, or radiological sensors would be installed in the vicinity of the airfield access gates and adjacent to Buildings 1220 and 1281.

Construction activities would be conducted in accordance with applicable Air Force safety regulations and standards prescribed by the Air Force Occupational Safety and Health (AFOSH) requirements (AFI 91-301), as well as other applicable Federal and State requirements. Vegetation management, debris disposal, and environmental controls would be the same as identified for Alternative 1.

2.4.3 No Action Alternative

Although the No Action alternative would not fulfill the purpose and need for the action, it is carried forward as a baseline for comparison of the environmental effects of the proposed action. The No Action alternative would be defined as not installing any upgrades to the existing airfield security system at Andrews AFB. As a result, the airfield and associated airfield facilities, as well as distinguished users of the 89 AW's air transport system, would continue to be vulnerable to potential security threats.

2.5 Description of Past and Reasonably Foreseeable Future Actions Relevant to Cumulative Impacts

This EA identifies actions that have been conducted in the past, are ongoing or in the planning stages, and future actions that are related to the proposed action. These actions would be included in this cumulative analysis to the extent that details regarding such actions exist and the actions have the potential to interact with the proposed action. No such past, ongoing, planned, or future actions have been identified.

2.6 Identification of Preferred Alternative

Alternative 1 is the preferred alternative. Table 2-1 below summarizes the potential impacts of implementing Alternative 1 (proposed action), Alternative 2, and the No-Action Alternative. The potential impacts to relevant resources are based on the information and analyses presented in Section 3.0 and Section 4.0. Potential short-term and long-term impacts were considered in the comparison of alternatives.

Table 2-1

Comparison of Alternatives

Resource/Issue	Alternative 1	Alternative 2	No Action
Land Use	Access to the airfield would be restricted except as allowed only through new and existing pedestrian turnstiles and access gates only.	Access to the airfield would be restricted except as allowed through existing hangars or airfield buildings, or existing entry-exit gates.	No change
Vehicular Transportation	Minor change in daily traffic flow due to installation of vehicle gates.	No change in daily traffic flow due to installation of vehicle gates.	No change
Hazardous Materials and Wastes Management	Potential short-term negative effects should accidental release of hazardous waste (leaks and spillage of fuel or lubricants) occur during construction activities; implementation of standard operating procedures (i.e., best management practices [BMPs]) would reduce potential for release of hazardous materials. No long-term effects.	Potential short-term negative effects should accidental release of hazardous waste (leaks and spillage of fuel or lubricants) occur during construction activities; implementation of standard operating procedures (i.e., best management practices [BMPs]) would reduce potential for release of hazardous materials. No long-term effects.	No change
Air Quality	Potential short-term effects due to emissions of particulate matter and combustion engine emissions during construction activities; emissions would not be expected to trigger any regulatory concerns or issues.	Potential short-term effects due to emissions of particulate matter and combustion engine emissions during construction activities; emissions would not be expected to trigger any regulatory concerns or issues.	No change
Noise	Minor increase in noise during construction activities. No long-term change in noise levels.	Minor increase in noise during construction activities. No long-term change in noise levels.	No change
Socioeconomics	No change in population; short-term employment opportunities for local contractors.	No change in population; short-term employment opportunities for local contractors.	No change
Topography, Geology, and Soils	Potential short-term effects to soils from construction activities; soil erosion control methods and BMPs reduce potential for effects; no long-term effects.	Potential short-term effects to soils from construction activities; soil erosion control methods and BMPs reduce potential for effects; no long-term effects.	No change
Water Resources	No effect to groundwater or wetlands. Minor short-term disturbance to surface waters from installation of locking steel grates on existing culverts.	No effect to groundwater or wetlands. Minor short-term disturbance to surface waters from installation of locking steel grates on existing culverts.	No change
Biological Resources	Minor effects to vegetation and wildlife during construction activities. Not likely to adversely affect threatened and endangered species.	Minor effects to vegetation and wildlife during construction activities. Not likely to adversely affect threatened and endangered species.	No change
Cultural Resources	No effects expected based on information contained in Andrews AFB Cultural Resources Management Plan.	No effects expected based on information contained in Andrews AFB Cultural Resources Management Plan.	No change

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3 Affected Environment

Section 3 of the EA describes the existing physical, natural, and cultural environments of areas potentially affected by the proposed action.

3.1 Land Use

Andrews AFB encompasses 4,346 acres (excluding remote sites) in Prince George's County, Maryland. The base is adjacent to the community of Camp Springs. Andrews AFB is home to the 89th Airlift Wing, which provides worldwide airlift and logistical support for the President of the United States, the Vice President, cabinet members, and other high-ranking United States and foreign officials and dignitaries; the base supports the flight operations of more than 100 aircraft. Land uses at the base have been designated into six broad categories: Lakes, Forest, Recreation, Housing, Airfield Operations, and Administrative/Industrial (see Figure 3-1).

The base is divided into a western and eastern section, separated by the airfield that runs north-south. The western portion of the base contains the majority of the land area, including a large outdoor recreation/golf course facility, all of the community facilities, and Malcolm Grow Medical Center. Land uses in the eastern section include various airfield operations, support facilities and administrative/industrial facilities.

The overall visual character of the base is industrial and urban in nature, with large expanses of paved or developed land. Improved grounds, consisting of administrative and athletic areas, as well as all covered areas (under buildings and pavements), family housing areas, golf course fairways and greens, and the two runways encompass approximately 2,260 acres, or 52%, of the total land area. Semi-improved grounds encompass approximately 1,500 acres of open spaces in the runway area and clear zone. The remaining 586 acres of the installation consist primarily of undeveloped forestland.

In accordance with Air Force Instruction (AFI) 32-7062, Air Force Comprehensive Planning, Andrews AFB developed a Base General Plan in 1996, which outlines existing and anticipated future land use on the base (USAF 1996). The plan was most recently updated in 2001. According to the 2001 plan update, little undeveloped land suitable for future development remains (USAF 2001). The only land use changes presently anticipated for the base are the proposed conversion of family housing near the East Gate (now closed, located on the northeast perimeter) to administrative use, and the proposed conversion of family housing near the Pearl Harbor Gate (now closed, located on the east

perimeter) to industrial use. Neither area adjoins the airfield. Most capital improvement projects proposed in the 2001 Base General Plan update are renovations, demolitions, and construction of modest-sized buildings and other structures in the developed areas west and east of the airfield. No capital improvement projects are proposed for areas directly north or south of the airfield (USAF 2001).

3.2 Transportation

Vehicle entry to Andrews AFB is controlled at the three access gates. Visitors lacking passes must report to the visitors' center at the Main Gate to obtain a pass. The major roads at Andrews AFB include Perimeter Road, Patrick Avenue, Arnold Drive, Virginia Avenue, and Menoher Drive. Of these, only Perimeter Road (as North Perimeter Road and as South Perimeter Road) crosses the airfield. The other main roads are located within the built-up areas west and east of the airfield (USAF 1996; 2001).

Perimeter Road forms a loop divided into North, East, South, and West segments. North Perimeter Road and South Perimeter Road are two-lane paved roads that cross the northern part and southern part of the airfield, respectively. These two segments of Perimeter Road allow vehicles to cross from the western to the eastern part of the base. Vehicles are generally allowed to traverse either segment without regard to airfield activities. However, vehicles over 15 feet in height are restricted from North Perimeter Road and South Perimeter Road so as to not cause flight obstructions to the airfield.

3.3 Hazardous Materials and Waste Management

Andrews AFB is a large quantity generator of hazardous waste permitted under the Resource Conservation and Recovery Act (RCRA). The 89th Civil Engineering Squadron Environmental Flight (89CES/CEV) is responsible for compliance with the base's RCRA permit. Primary types of hazardous wastes generated at Andrews AFB include batteries, used fuel and oil, solvents, fluorescent bulbs, contaminated rags and fuel filters, and solvent-contaminated solids. The majority of hazardous waste is generated because of aircraft operations.

Historic fuel supply activities, landfills, and other support and training operations contaminated portions of the ground and surface waters at Andrews AFB with metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and pesticides. Andrews AFB was formally added to the National Priorities List (NPL) in June 1999.

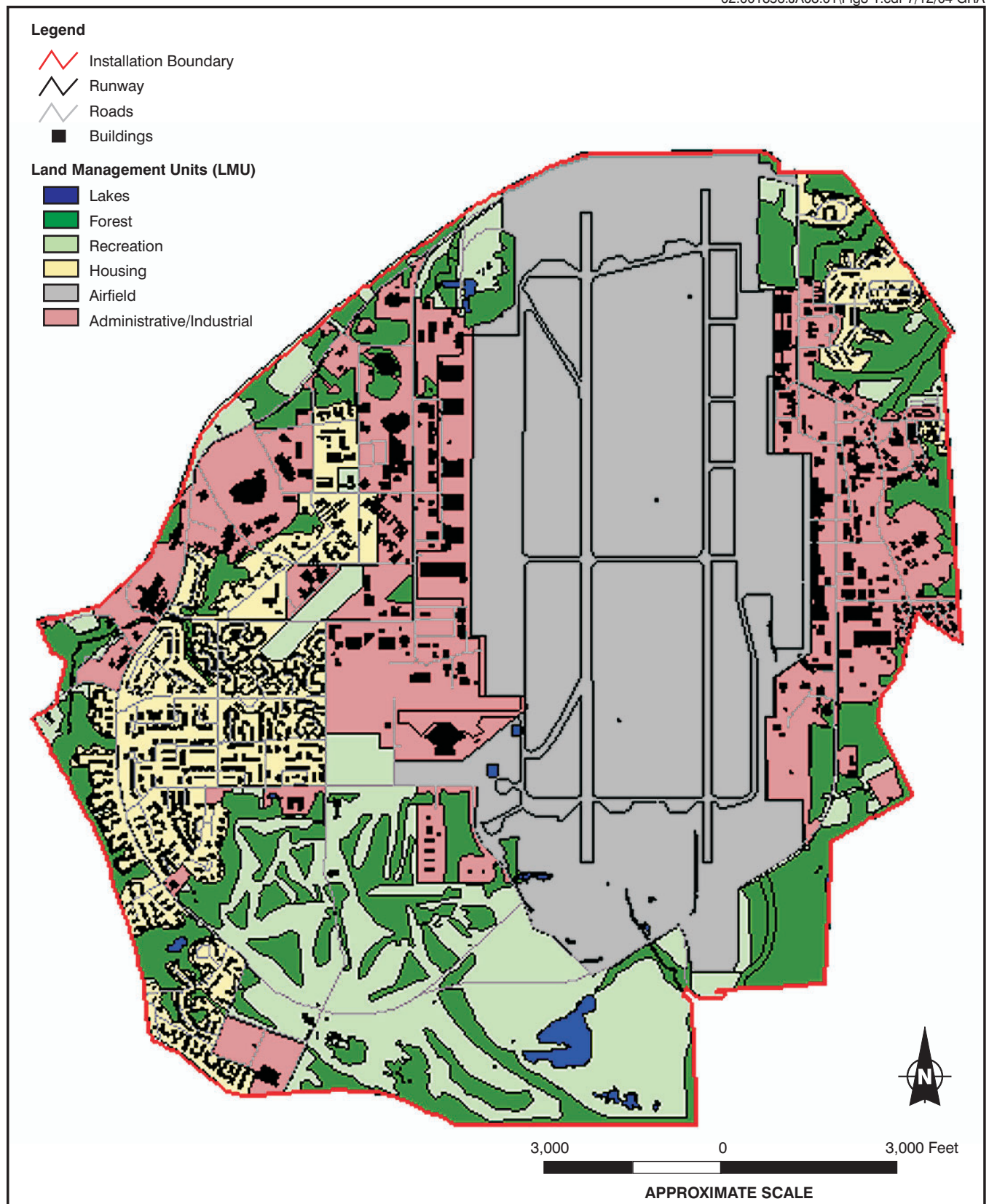


Figure 3-1: Land Use Features, Andrews AFB

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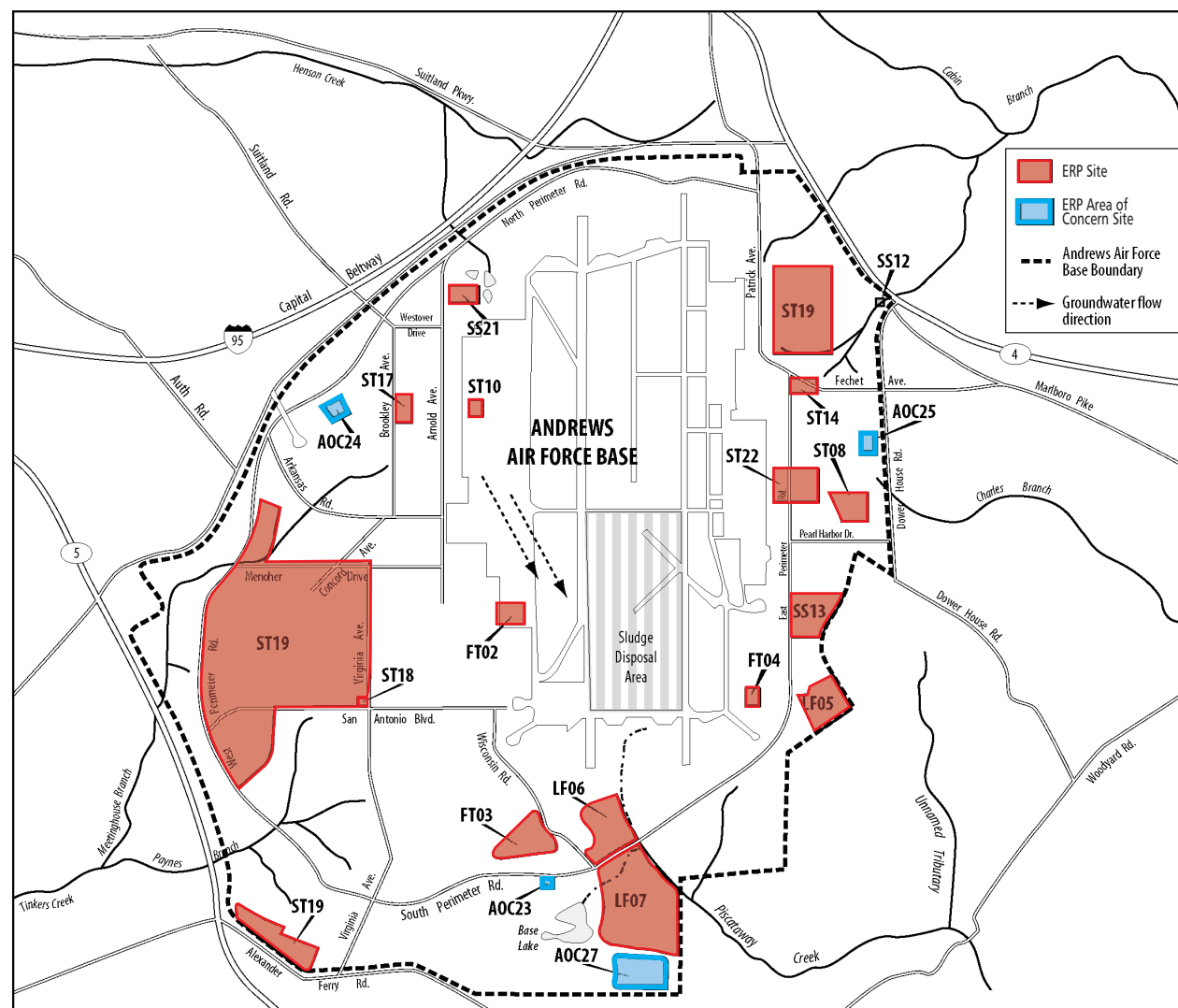


Figure 3-2: Environmental Restoration Program Sites and Areas of Concern, Andrews AFB

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The Environmental Restoration Program (ERP), formally known as the Installation Restoration Program (IRP), was established by the DoD to protect human health and the environment by addressing sites where past activities led to releases of hazardous substances to the environment. These sites are addressed based on the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as well as the National Oil and Hazardous Substances Contingency Plan (NCP). Andrews AFB is responsible for 22 ERP Sites and 11 Areas of Concern (AOCs) on the base and on remote sites located in Brandywine and Davidsonville, Maryland. Figure 3-2 provides the locations of the ERP sites and AOCs at the main base. As can be seen, most of the ERP sites and AOCs are located in the developed areas east and west of the airfield.

The proposed airfield security system would be installed in proximity to ERP sites FT02, FT03, LF06, LF07, SS13, and ST22. Sites FT02 and FT03 are former fire training areas where fuel and waste oil were burned; sites LF06 and LF07 are abandoned landfills previously used for the disposal of construction debris and small quantities of household and shop waste; site SS13 is a former petroleum, oil, lubricant (POL) yard; and site ST22 is a large groundwater plume contaminated with jet fuel at Hangar 13 (NOAA 2004) (Harris 2004).

The Environmental Flight also manages a program for collecting, handling, and disposing of solid waste generated on the base (including construction debris). Solid waste generated on the base is collected and handled by a contractor, and is taken to commercial landfills in Prince George's County for disposal. Two incinerators on the base, permitted by the Maryland Department of the Environment, are used for disposal of medical waste, classified waste, and waste from foreign flights.

3.4 Air Quality

The Clean Air Act (CAA) of 1970, 42 USC 7401 *et seq.*, amended in 1977 and 1990, is the primary Federal statute governing air pollution. The CAA designates six pollutants as criteria pollutants for which National Ambient Air Quality Standards (NAAQS) have been promulgated to protect public health and welfare. The six criteria pollutants are particulate matter (PM10 and PM2.5), carbon monoxide (CO), sulfur dioxide (SO2), nitrogen dioxide (NO2), lead (Pb), and ozone (O3). The State of Maryland has adopted these Federal standards. Federal law requires states or local air quality control agencies to have a State Implementation Plan (SIP) that prescribes measures to eliminate or reduce the severity and number of violations of NAAQS and to achieve expeditious attainment of these standards. Areas that do not meet NAAQSs are designated as "nonattainment" for those criteria pollutants. Nonattainment status is further defined by the extent the relevant standard is exceeded. There are six classifications of ozone nonattainment status: - transitional, marginal, moderate, serious, severe, and extreme; and two classifications of CO and PM10 nonattainment status: - moderate and serious. The remaining criteria pollutants have designations of either attainment, nonattainment, or unclassifiable. Areas

redesignated from nonattainment to attainment are commonly referred to as maintenance areas, indicating the area is in attainment but subject to an EPA-approved maintenance plan for a specific pollutant.

Andrews AFB is within the Washington Metropolitan Area Air Quality Control Region. Portions of the Washington Metropolitan Area, including Andrews AFB, have been designated as “serious” nonattainment areas for ozone. This designation is mainly attributed to nitrous oxides (NOx) and volatile organic compounds (VOCs) emissions from automobiles in the metropolitan area on warm days with low wind velocities. Maryland has submitted a SIP for the metropolitan region to maintain and attain compliance with the NAAQS in accordance with the CAA. The NAAQS are not to be exceeded more than once per year, except for O₃ and particulate matter less than 10 micrometers in diameter (PM₁₀), which are not to be exceeded more than an average of one day per year.

3.4.1 The General Conformity Rule

The General Conformity Rule has been promulgated by EPA to ensure that the actions of Federal departments or agencies conform to the applicable SIP. The General Conformity Rule covers direct and indirect emissions of criteria pollutants or their precursors that are caused by a Federal action, are reasonably foreseeable, and can practically be controlled by the Federal agency through its continuing program responsibility. Conformity is demonstrated if the total net emissions expected to result from a Federal action in a nonattainment or maintenance area will not:

- Cause or contribute to any new violation of any NAAQS;
- Interfere with provisions in the applicable SIP for maintenance of any standard;
- Increase the frequency or severity of any existing violation; or;
- Delay the timely attainment of a standard, interim emission reduction or milestone including, where applicable, emission levels specified in the applicable SIP for purposes of demonstrating reasonable further progress, attainment, or a maintenance plan.

A Federal action is exempt from applicability of the General Conformity Rule requirements if the action’s total net emissions are below the *de minimis* levels specified in the rule and are not regionally significant (i.e., the emissions represent 10% or less of nonattainment or maintenance area’s total emission inventory of that pollutant) or are otherwise exempt per 40 CFR 93.153. Total net emissions include direct and indirect emissions from all stationary point and area sources, construction sources, and mobile sources caused by the Federal action. However, there are special considerations regarding mobile-source emissions. If the action or a portion of the action is subject to the

transportation conformity rule, that portion of the action is not subject to the General Conformity Rule.

3.4.2 Air Quality Operating Permit

Andrews AFB is divided into several organizational elements for purposes of air quality permits. Air Force operations under the 89th Airlift Wing operate under a Title V Operating Permit issued by the MDE. The Title V Operating Permit encompasses various emission source types, including boilers, paint booths, fuel tanks, and generators. There are approximately 60 emission units covered by the permit. In addition, there are tenant units on the base (Air Force Reserve, Air National Guard, and Army/Air Force Exchange) that are not included in the Title V Operating Permit, but instead operate emissions units under separate permits issued by MDE. The calendar year 2003 total emissions for Title V registered sources at Andrews AFB are provided in the emissions certification report (Andrews AFB 2003).

3.5 Noise

The primary source of noise at Andrews AFB is associated with aircraft operations and maintenance. These noise sources impact land uses on the station as well as in the surrounding developed areas. The noise environment around an air station typically is described using a measure of the cumulative noise exposure (i.e., day-night average sound level [DNL]) that results from aircraft operations. DNL takes into consideration the time of day that aircraft events occur. Noise that occurs between 10:00 p.m. and 7:00 a.m. is weighted more heavily than noise during the day to account for the difference in human noise perception during the nighttime hours. Within the 65 DNL contour, noise levels are similar to an urban environment. Noise levels in the 75 DNL contour would be similar to the downtown area of a major city.

Noise zones associated with Andrews AFB are generally asymmetrical, reflecting higher noise levels east of the runways because of the greater number of closed pattern flight operations conducted over the more rural landscape east of the base (89 AW, 1998). Most of the central part of the base, including the airfield, flight lines, Base Lake Recreation Area, eastern extension of the golf course, and some of the administrative areas in the eastern part of the base, are located within the 80+ decibel (dB) DNL or the 75-80 dB DNL noise zones. The remainder of the eastern part of the base and areas close to the western flight line are within the 65-75 dB DNL noise zone. The airfield security system would be installed within the 80+ db DNL noise zone.

3.6 Socioeconomic Resources

3.6.1 Population

Prince George's County includes 487 square miles of land and 12 square miles of water surface in the Washington, DC, metropolitan area. According to the 2000 census, the total population of Prince George's County was 787,112 persons. The population of the county increased by 8% between 1990 and 2000, and is projected to grow by up to 19% by 2025 (MNCCP 2000). Approximately 7,000 military personnel and their dependents reside at Andrews AFB (89 AW, 1998).

3.6.2 Employment

Andrews AFB is a major source of employment in Prince George's County. As of 2002, the total Andrews AFB workforce was 16,983 persons, including 13,490 appropriated fund military personnel, 2,201 appropriated fund civilian personnel, and 1,292 non-appropriated fund contract civilians and employees of on-base private businesses. Combined military and civilian salaries at the base exceed \$400 million annually.

3.6.3 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, mandates that Federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of the programs on minority and low-income populations. Disproportionate environmental impact occurs when the risk or rate for a minority population or low-income population from exposure to an environmental hazard exceeds the risk or rate of the general population and, where available, to another appropriate comparison group (DOD 1995; EPA 1998).

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, mandates that Federal agencies identify and assess environmental health and safety risks that may disproportionately affect children as a result of the implementation of Federal policies, programs, activities, and standards (62 *Federal Register* 19883-19888).

In order to comply with Executive Orders 12989 and 13045, ethnicity, poverty status, and age of the populations in the census tracts bordering Andrews AFB were examined and compared to regional, state, and national data (Table 3-1). The potential effects of the proposed action on minority and low-income populations and children have been evaluated in accordance with the requirements of the Executive Orders and are documented in Section 4.5.3.

Table 3-1**Environmental Justice Data**

Location	Total Percent Minority^a	Poverty Rate^b	Percent Aged 17 years or Younger
United States	22.4	12.4	25.7
Maryland	34	8.5	25.6
Prince George's County	70.4	7.7	26.8
Tract 8011.04 (Andrews AFB)	32	2.4	35
Tract 8007.01	81	3.6	27
Tract 8007.02	57	3.7	26
Tract 8012.03	77	3.1	27
Tract 8012.04	78	1.8	26
Tract 8012.05	64	6.3	25
Tract 8019.06	70	6.6	29
Tract 8022.01	70	5.7	25

Source: US Census Bureau 2000

^a To calculate the Total Percent Minority, the numbers for only individuals in the "one race" category were included. The "one race" individuals represented 95-99% of the population; use of this population group allows for an accurate portrayal of the entire population.

^b The most recent data for percent below poverty level available was used in the table. The national, state, county, and the census tract data are year 1999 information.

As shown in Table 3-1, the minority populations in the tracts surrounding Andrews AFB are significantly higher than the Federal or State national percent minority or state percent minority; however, the minority percentage in these tracts is comparable to the percent minority in Prince George's County. In addition, the poverty rate in the census tracts surrounding the base is below the national, county, and state levels. The percentage of children aged 17 or younger in the census tracts surrounding the base is comparable to the percentage of minors found throughout the rest of the county, state, and country.

3.7 Topography, Geology, and Soils

3.7.1 Topography

Andrews AFB is located near the western margin of the Coastal Plain physiographic province. This province is characterized by gently rolling hills and valleys (USGS 2004). Elevations at the base range from approximately 220 feet above mean sea level (amsl) in the southeast corner of the base to approximately 280 feet amsl in the northern section. Areas of moderately sloping topography are limited to stream banks.

3.7.2 Geology

The Coastal Plain Province is underlain by a wedge of unconsolidated sediments, including gravel, sand, silt, and clay. The thickness of these sedimentary layers is approximately 1,300 feet in the vicinity of Andrews AFB. The sediments dip eastward at a low angle, generally less than one degree, and thicken seaward. Surface materials are comprised mainly of sand and gravel, with minor amounts of silt and clay.

3.7.3 Soils

The Soil Conservation Service completed a detailed soil survey of Andrews AFB in 1974 (SCS 1974). Approximately 85% of Andrews AFB has been disturbed by cut and fill or other construction activities since 1942. Soils on most of the airfield and base lands north and south of the airfield are mapped as Udorthents, defined as soils that have been altered by cutting, filling, or urban development. Soils throughout the airfield were graded during construction of the runways, taxiways, and overrun surfaces. Most soils south of the airfield constitute cuts and fills associated with two abandoned landfills and construction of South Perimeter Road, Base Lake, a series of borrow pits, and (more recently) an extension to the base golf course. Soils in the narrow floodplain bordering the channel of Piscataway Creek are mapped as Iuka fine sandy loam, a soil mapping area known to contain inclusions of poorly drained hydric soils.

3.8 Water Resources

3.8.1 Groundwater

Shallow groundwater occurs beneath Andrews AFB within the Brandywine Formation and the underlying Calvert Formation. These formations range in thickness from 65 to 150 feet. Groundwater is generally encountered at the base from approximately 4 to 9 feet below the ground surface. In general, the direction of groundwater flow at the base is toward the south to Piscataway Creek (NOAA 2004).

Deep aquifers beneath Andrews AFB occur in the Magothy, Patapsco, and Patuxent Formations. Each of these aquifers has the potential to yield significant quantities of water. The estimated depths to the tops of the aquifers range from 300 to 900 feet (HQ Air Force 2001).

3.8.2 Surface Water

Andrews AFB is located on a drainage divide that separates the watersheds of the Potomac River to the west from the Patuxent River to the east. The majority of the base drains to the south and west and is within the Potomac River watershed. Headwater

tributaries to the Potomac River originating on the base include Piscataway Creek, Meetinghouse Branch, Paynes Branch, and Henson Creek (see Figure 3-3). The northeast section of the base is within the Patuxent River watershed. Two headwater tributaries to the Patuxent River, Cabin Branch and Charles Branch, originate in this section of the base. In addition to these watercourses, nine small ponds and Base Lake are located within the installation. Base Lake covers approximately 14 acres in the southern section of the base.

3.8.3 Wetlands

A wetland survey conducted in 1996 at Andrews AFB delineated 34 wetlands covering 96 acres (IT Corporation 1997). Figure 3-3 shows the location of delineated wetlands. The majority of the wetlands occurring on base are in areas adjacent to stream channels, in low-lying grassy areas within the airfield, along pond fringes, and in drainage ditches and roadside swales south of Base Lake. The types of wetlands found on base are forested (81.3 acres), scrub-shrub (0.5 acre), emergent (9.6 acres), open water (3.2 acres), and areas recently flooded due to beaver activity (1.7 acres).

The proposed airfield perimeter fence would not cross any wetlands, nor would the utility pole plants be located within any wetland areas. The 0.35-acre forested area to be cleared as part of the security system upgrade has been determined to be a non-jurisdictional wetland. The area includes Red maple (*Acer rubrum*), Willow oak (*Quercus phellos*), and American elm (*Ulmus Americana*) in the tree layer, and Crabgrass (*Digitaria sanguinalis*) and Periwinkle (*Vinca spp*) in the herbaceous layer. The U.S. Army Corps of Engineers (USACE) evaluated the area in 1997 and determined that no connections were present between the wetland and surface waters. Consequently, the area was classified as an “isolated” wetland and is therefore not subject to regulation under Section 404 of the Clean Water Act.

3.8.4 Floodplains

Floodplains have not been formally mapped on Andrews AFB. Based on its position in the landscape, floodplains on the base are likely to be limited to narrow zones of low-lying land immediately adjacent to stream channels.

Prince George’s County has performed flood modeling as part of a comprehensive watershed management plan for Piscataway Creek (Prince George’s County 1986b). The modeling showed that South Perimeter Road in the southern section of Andrews AFB is susceptible to inundation by the 100-year flood. The modeling projects that a 100-year flood would inundate South Perimeter Road to a depth of 2.5 feet at the point where it crosses Piscataway Creek.

3.9 Biological Resources

3.9.1 Vegetation

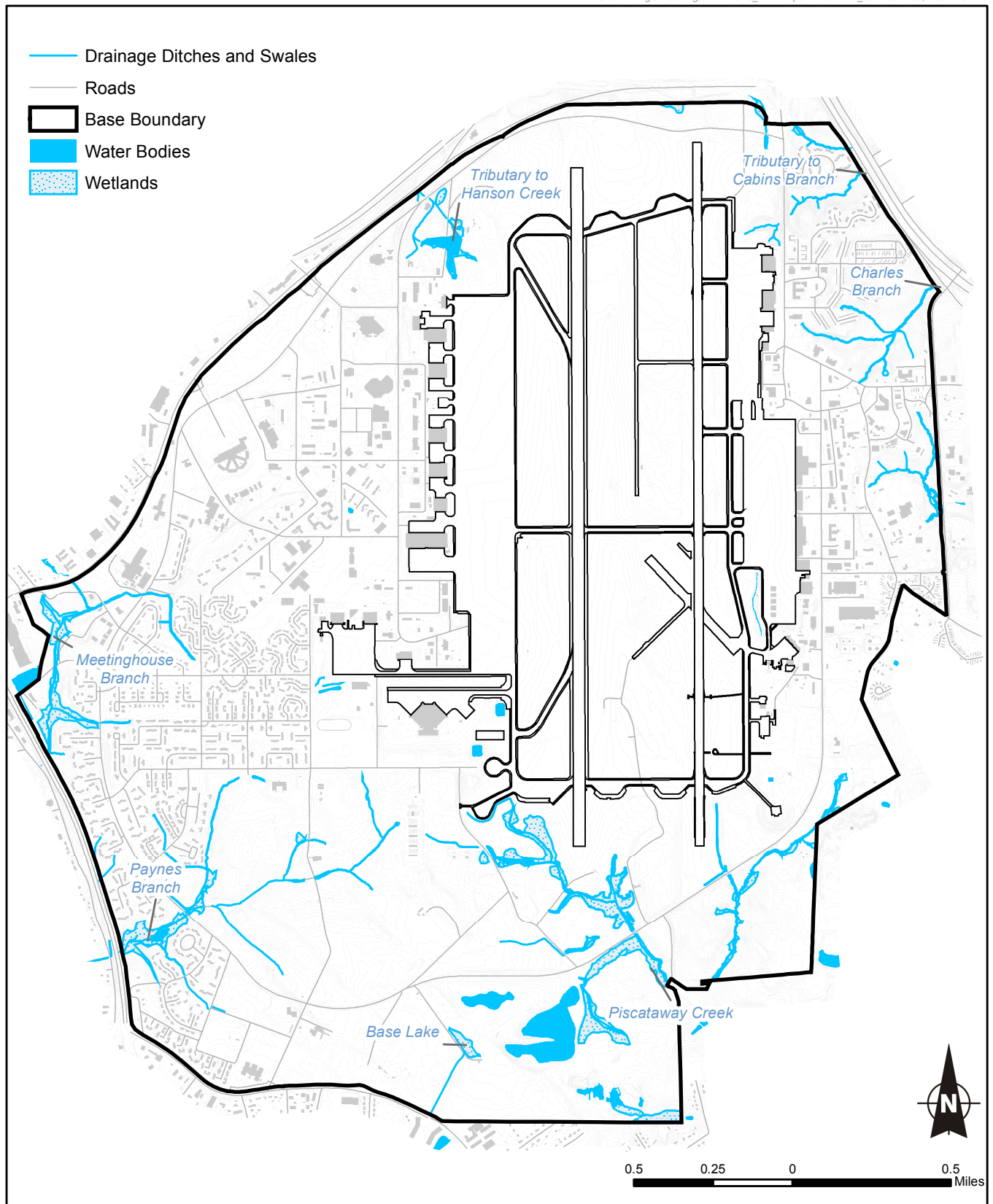
Andrews AFB is located in the Oak-Pine Forest Region, Atlantic Slope Section (Braun 1950). In the original forest, deciduous trees (predominantly oaks and hickories) were the most abundant. A significant portion of Prince George's County has been deforested for urban and suburban development.

Vegetation communities at Andrews AFB consist of extensively managed landscape areas (improved areas) and other unmanaged patches of natural plant communities. Nearly 80 percent of the base is developed or intensely managed (improved or semi-improved). The intensely managed improved areas include lawns, gardens, golf course fairways, ponds, bare ground, and recreational fields. Semi-improved areas include runway borders, the runway infield, and approach clear zones, where vegetation is permanently maintained in an herbaceous condition. The remaining unimproved areas at the base primarily comprise late successional ecological communities, including mixed hardwood forests, mixed hardwood/pine forests, oak forests, oak/hickory forests, oak/pine forests, pine forests, and red maple swamp. These communities cover approximately 600 acres and are concentrated in the southern section of the base and around the base perimeter. Some scattered areas on the base also contain early successional herbaceous communities dominated by nonindigenous, invasive plants, such as Japanese honeysuckle (*Lonicera japonica*), English ivy (*Hedera helix*), wintercreeper (*Euonymus fortunei*), privet (*Ligustrum* spp.), periwinkle (*Vinca minor*), wineberry (*Rubus phoenicolasius*), tree-of-heaven (*Ailanthus altissima*), oriental bittersweet (*Celastrus orbiculatus*), autumn olive (*Elaeagnus umbellata*), Russian olive (*Elaeagnus angustifolia*), beggar-ticks (*Bidens polylepis*), tall fescue (*Festuca elatior*), purple loosestrife (*Lythrum salicaria*), Korean lespedeza (*Lespedeza cuneata*), common reed (*Phragmites australis*), and multiflora rose (*Rosa multiflora*).

3.9.2 Wildlife

Wildlife diversity at Andrews AFB is limited due to the relatively minimal coverage and fragmented nature of natural habitats occurring at the installation. The maintained grassy areas associated with the airfield provide habitat for a variety of bird species that utilize open field habitats such as raptors, blackbirds, starlings, crows, and various species of songbirds. Small mammals utilizing this habitat would likely include the eastern cottontail rabbit, skunk, and various rodent species. Relatively greater species diversity would be expected in the upland and wetland forested habitats around the perimeter of the base.

Larger mammal species such as gray fox, Virginia opossum, beaver, white-tailed deer, and raccoon, as well as various species of reptiles and amphibians, would likely be



Source: Andrews AFB 2004

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Figure 3-3: Surface Waters and Wetlands, Andrews AFB

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resent in these areas. Base Lake, and, to a lesser extent, the other open water areas present on the base, provide habitat for various species of migratory waterfowl.

3.9.3 Threatened and Endangered Species

Inventories of Federal and State threatened and endangered species have been conducted at Andrews AFB in 1993 and 1996/1997 (Davis 1993; Parsons 1998). Table 3-2 lists the rare, threatened, and endangered species that have been identified as occurring at Andrews AFB, as well as the species protection status and habitat requirements. Federal and State-listed rare, threatened, and endangered species potentially occurring within or in proximity to Andrews AFB include the bald eagle, and four plants, - the sandplain gerardia, the ten-lobed agalinis, the blunt-leaved gerardia, and the tall nutrush.

Table 3-2

Rare, Threatened, and Endangered Species at or in the Vicinity of Andrews AFB

Species	Scientific Name	Federal Status	State Status	Habitat
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T	E	Undisturbed areas near fishable open waters
Sandplain Gerardia	<i>Agalinus acuta</i>	E	E	Dry, sandy open areas of the coastal plain in acidic, low-nutrient soils
Ten-lobed Falsefoxglove	<i>Agalinis obtusifolia</i>	--	E	Flatwoods, bogs, wet pine savannas, upland glades.
Blunt-leaved Gerardia	<i>Agalinis obtusifolia</i>	—	E	Pine thickets and openings on the coastal plain, usually sandy soil
Tall Nutrush	<i>Scleria triglomerata</i>	--	R	A variety of dry to moist, open areas, often in sand; fields, clearings and paths in oak woods, and woods borders.

Sources: Davis 1994; Parsons 1998

Status Codes: T – Threatened
E – Endangered
R – Rare

The Federal/ and State threatened/endangered bald eagle was observed near Base Lake in 1996. Field surveys did not result in the identification of any nest sites and it was determined that the eagles were likely transient visitors from the Chesapeake Bay or possibly the Potomac River (Parsons 1998). There are four sites within the vicinity of the project area on the southeast portion of the base where State and Federally listed plant species have been identified as occurring. One site contains ten-lobed falsefoxglove (*Agalinis obtusifolia*), (listed by the State-listed as endangered), and another site contains

tall nutrush (*Scleria triglomerata*), (listed by the State-listed as rare). A third site is where the sandplain gerardia (*Agalinis acuta*) has been known to occur. Subsequent surveys have not been able confirm the continued presence of this species (Andrews 2001). The blunt-leaved gerardia (*Agalinis obtusifolia*) is known to occur in the southeast section of the base at a site approximately 750 feet southeast of the proposed location of the airfield security system.

3.10 Cultural Resources

Section 110 (a)(2) of the National Historic Preservation Act (NHPA; 16 U.S.C. 470, as amended) requires Federal agencies to inventory, protect, and maintain historic properties under their jurisdiction. Under Section 110 of the NHPA, Federal agencies are obligated to take into account the effect of their undertakings on cultural resources and to provide the Advisory Council on Historic Preservation an opportunity to comment on these undertakings.

3.10.1 Archaeological Resources

The Air Force completed a Phase II archaeological survey for Andrews AFB in 1999 (Bienenfeld and Leininger, 1999). A previous Phase I archaeological survey and consultations in 1993 with the Maryland Historic Trust (MHT), and Maryland State Historic Preservation Officer (SHPO) identified six sites on the base that required further evaluation to determine eligibility for the National Register of Historic Places (NRHP). The sites are identified as 18PR443 through 18PR448. Site 18PR447, located approximately 1,000 feet west of the northern threshold for the West Runway, constitutes the grounds surrounding the Belle Chance mansion (discussed as a historic resource in Section 3.10.2). It was investigated for possible subsurface artifacts related to Belle Chance and predecessor structures. Site 18PR448, located approximately 1,000 feet northwest of the northern threshold for the West Runway, is a foundation to a small building in a cluster of trees just north of Belle Chance. The other investigated sites are located close to the eastern and western perimeters of Andrews AFB, away from the airfield.

Following Phase II excavation of each of the six sites, the archaeologists performing the survey concluded that Sites 18PR443 through 18PR446 and 18PR448 were not eligible for the NRHP. The survey states that the sites lack integrity and do not demonstrate a capacity to yield otherwise unobtainable information important to prehistory or history. The prehistoric component of Site 18PR447 (the Belle Chance grounds) was determined not to be eligible for the NRHP, but the historic component of this area adjoining the Belle Chance mansion was determined to be eligible for such listing (Bienenfeld and Leininger 1999).

3.10.2 Historic Resources

Structures built before 1947 on Andrews AFB were evaluated in 1996 to determine whether they meet the eligibility criteria for inclusion on the NRHP (COE, 1996). Only two sites on Andrews AFB, both containing structures predating establishment of Andrews AFB, were found to meet the eligibility criteria. One site is Belle Chance, a country estate and outbuildings constructed in 1912 on the site of previous residences dating to the 17th century. The estate is located just northeast of the airfield in a wooded setting only about 1,400 feet west from the north threshold of the West Runway. The Air Force maintains the rural setting of the estate; the main house is vacant and in a state of disrepair. Although determined to be eligible for the NRHP, Belle Chance has not been listed on the NRHP. It is, however, listed as a County Historical Site by the Prince George's County Historic Preservation Commission (MNCPPC 1992).

The other site is Chapel II (the Forest Grove Methodist Episcopal Church), located on Fetchet Avenue near the eastern perimeter of the base, approximately 2,700 feet east of the East Runway. It is a one-story frame structure described as a good example of Gothic Revival ecclesiastical architecture. The original church building was constructed on the site in 1854 and was rebuilt from the foundation up in 1880. It was again rebuilt in 1986 by the Air Force after being destroyed by a fire. The building is surrounded by a graveyard with gravestones dating from 1874 to 1938. Although the evaluation report (COE 1996) concluded that Chapel II met the eligibility criteria for the NRHP, the MHT subsequently stated that the building was not eligible because the 1986 fire compromised its historic integrity. However, the chapel is identified as a County Historical Site in the *Historic Sites and District Plan* for Prince George's County (MNCPPC 1992). The MNCPPC also identifies the former site of St. Luke's Church and cemetery on the base in the plan (MNCPPC 1992).

No structures constructed after establishment of Andrews AFB were recommended for inclusion on the NRHP (COE 1996). The report notes that Andrews AFB and its facilities have undergone significant changes because of changing mission requirements and improvements, and that these changes have resulted in an overall loss of historic and architectural integrity. The report notes that Andrews AFB does not represent an important site in the World War II air defense system, that the base does not still contain structures with standardized World War II temporary building designs, and that a number of the early structures on the base have been removed.

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4 Environmental Consequences

This section presents the potential environmental consequences of implementing Alternative 1, Alternative 2 or the No Action alternative. The potential impacts to the human and natural environment were evaluated relative to the existing environment described in Section 3.0. For each environmental resource or issue, anticipated direct and indirect effects were assessed, considering both short- and long-term project effects.

4.1 Land Use

The significance of potential land use impacts is based upon the degree of sensitivity to land use changes affected by a proposed action. Typically, land use impacts are considered significant if they would: (1) violate or otherwise be inconsistent with adopted land use plans or policies; (2) undermine the viability of a preferred existing land use activity; (3) create threats to public health, safety, and welfare of adjacent or nearby land users; or (4) conflict with the fundamental mission of an installation.

None of the alternatives would conflict with existing land uses or future land use plans.

4.1.1 Alternative 1

The only land use change associated with Alternative 1 would be to limit access to the airfield, unless allowed through new, and existing, entry control points. This is considered a beneficial land use change due to the resulting increase in airfield safety and security. All new infrastructure associated with the upgraded airfield security system (e.g., fencing, utility poles, entry control points, etc.) would be installed in areas of the base designated as airfield operations and administrative/industrial land management units; therefore, the new infrastructure would be consistent with current land uses. Ornamental fencing and turnstiles will be installed in areas of high visibility to limit the effect of the new infrastructure on the aesthetic environment. The proposed additions and renovations to Buildings 1220 and 1281 for the security command and control rooms would represent a minor increase in building square footage (~750 square feet total) in a developed portion of the base and would not impact surrounding land uses.

Implementation of Alternative 1 would not require Prince George's County to alter its planning assumptions and recommended land uses; therefore, no change to the local planning document would be required.

4.1.2 Alternative 2

Alternative 2 would have similar effects on land use as those described for Alternative 1. In summary, no land use changes or conflicts would occur as result of Alternative 2.

4.1.3 No Action

Under the No Action alternative, the USAF would make no changes to the current land use at Andrews AFB or the surrounding area. As a result, there would be no land use impacts associated with this alternative.

4.2 Vehicular Transportation

None of the alternatives would result in significant changes to the traffic flow or transportation system at Andrews AFB.

4.2.1 Alternative 1

Installation of vehicle gates as described in Alternative 1 may affect the unrestricted access to daily parking spaces on the east side of the airfield; however, only minor changes to daily traffic flow are expected. The parking spaces which will be subject to restricted access represent a very small percentage of the total parking spaces available at the base and would not significantly affect the base's parking capacity. Equipment to be used for the security system installation would be temporarily staged on the sides of Perimeter Road and other roads on the base. The equipment is not expected to interfere with traffic flow.

4.2.2 Alternative 2

Alternative 2 would have similar, but slightly less effects on vehicular transportation as those described for Alternative 1. No new vehicle gates would be installed under Alternative 2, so there would be no additional restricted access to parking spaces and daily traffic flow would not be affected.

4.2.3 No Action

Under the No Action alternative, the USAF would make no changes to vehicular transportation of Andrews AFB or the surrounding area. As a result, there would be no impacts to transportation associated with this alternative.

4.3 Hazardous Materials and Waste Management

No alternative would disturb, nor interfere with, any sites on the NPL or under investigation or remediation as part of the Andrews AFB ERP. None of the alternatives would result in a release of a hazardous material.

4.3.1 Alternative 1

Implementation of Alternative 1 would require minimal use of hazardous materials for construction activities associated with the security system installation and building additions, and the vegetation management operations. Hazardous materials would be used and wastes generated as part of the maintenance and fueling of equipment that are utilized during these activities. However, construction contractors would be required to comply with the Spill Prevention, Control, and Countermeasures (SPCC) Plan in effect at Andrews AFB 89th CES/CEVP in order to meet the regulatory requirement to deal with the potential hazardous waste issue. The existing procedures outlined in AFOSH would be followed for handling and storage of hazardous materials. Furthermore, contractors would be required by contract to remove any hazardous waste generated by fueling and maintenance activities, and to dispose of such waste at facilities they select in accordance with their own regulatory requirements.

The removal of existing asphalt to allow for construction of new entry and exit gates would not generate new hazardous waste, and the contractors would be required to dispose of any construction waste at approved landfills not located on Andrews AFB. Herbicide applications would be used to control invasive species and other vegetation along the perimeter fence. However, herbicides would be EPA-approved and would be used according to directions supplied on the container label. No construction activities or disturbances of soil will take place on ERP sites. Therefore, there will be no significant impacts to human health or the environment by implementation of Alternative 1.

4.3.2 Alternative 2

Implementation of Alternative 2 would have the same impacts as those discussed for Alternative 1.

4.3.3 No Action

Under the No Action alternative, there would be no change to hazardous materials and wastes management at Andrews AFB.

4.4 Air Quality

None of the alternatives would result in exceedances of air quality standards or expose sensitive receptors to increased pollutant concentrations.

4.4.1 Alternative 1

Implementation of Alternative 1 would have a temporary impact on local air quality; however, this impact would be minor. The primary impact would be directly related to the generation of particulate matter and combustion engine emissions at and around the project area during construction activities. Minor amounts of particulate matter will be generated since most of the project components will be installed in developed areas of the base and will not involve soil disturbance. Installation of the various components of the security system and the proposed minor vegetation clearing will require the use of equipment containing internal combustion engines (e.g., trucks, chain saws, etc.). An estimated 12 such pieces of equipment would be used during the projected 365-day construction period. Because of the small area of construction disturbance and brief period of emissions resulting from equipment operation, the potential emissions are clearly *de minimis*. An air conformity determination in accordance with 40 CFR 93.153 would be performed as necessary before Alternative 1 is implemented.

4.4.2 Alternative 2

Alternative 2 would have similar impacts on air quality as Alternative 1.

4.4.3 No Action

Under the No Action alternative, there would be no change to air quality at Andrews AFB.

4.5 Noise

Impacts from noise due to implementation of any of the alternatives would be limited to short-term, minimal increases in noise levels during construction activities. No long term or major changes to the noise environment would occur.

4.5.1 Alternative 1

Implementation of Alternative 1 would not permanently alter the noise environment in and around Andrews AFB. Alternative 1 would temporarily generate brief periods of

noise due to the operation of equipment used in trimming and cutting trees (such as chain saws and chippers), as well as operation of trenchers and other equipment used to install the new fence and poles. These activities would take place only during the daytime and would be within background noise levels resulting from operation of military aircraft and from urban traffic. Upon completion of the project, the noise exposure would return to existing levels, which are dominated by aircraft overflights. Therefore, no long-term or major impact to the noise environment would occur from implementing Alternative 1.

4.5.2 Alternative 2

Noise impacts for Alternative 2 would be the same as those discussed for Alternative 1.

4.5.3 No Action

The No Action alternative would not cause any changes to the noise environment on the base or in surrounding communities.

4.6 Socioeconomic Resources

4.6.1 Population

None of the alternatives would change the number of personnel permanently stationed or temporarily employed at Andrews AFB. Therefore, implementation of any of the alternatives would have no effect on the base, local, or regional population.

4.6.1.1 Alternative 1

Alternative 1 would have no effect on the base, local, or regional population.

4.6.1.2 Alternative 2

As with Alternative 1, there would be no impact on the base, local, or regional population under Alternative 2.

4.6.1.3 No Action

The No Action alternative would have no effect on the base, local, or regional population.

4.6.2 Employment

None of the alternatives would result in significant changes in employment at the base or in the local community.

4.6.2.1 Alternative 1

Alternative 1 would not substantially affect regional employment opportunities or change current employment at the base. Construction of the security system would provide short-term employment opportunities for local contractors.

4.6.2.2 Alternative 2

Alternative 2 would have employment impacts similar to Alternative 1.

4.6.2.3 No Action

The No Action alternative would not cause any changes to employment on the base or in surrounding communities.

4.6.3 Environmental Justice

The various components of the proposed security system are not located immediately adjacent to off-base residential areas. In addition, construction activities and operation of the security system will have no effect on any areas outside of the base. Therefore, implementation of any of the alternatives would not have disproportionately high or adverse health or environmental effects on minority or low-income populations pursuant to Executive Order 12898, or pose disproportionate environmental health or safety risks to children pursuant to Executive Order 13045.

4.7 Topography, Geology, and Soils

The surface disturbances proposed for construction activities for the security system installation and vegetation maintenance would have only minor impacts on soils and no impacts on the topography and geology of the area.

4.7.1 Alternative 1

Implementation of Alternative 1 would not alter the topography or subsurface geology at the base. The majority of the infrastructure associated with the proposed security system

would be installed in developed portions of the base characterized by impervious surfaces. Only a small portion of the perimeter fence and the majority of the utility poles would be installed in undeveloped, but largely previously disturbed areas. Temporary impacts to surface soils would occur in these areas during construction activities. BMPs would be implemented in these areas to control erosion and sedimentation and would include silt fence and stabilized construction entrances at various entry/exit locations. Vegetated areas disturbed during the project would be hydroseeded immediately following construction to reestablish ground cover. In addition, the construction staging area would be provided with adequate BMPs managed to ensure the proper level of control of vehicles and materials, and the minimum disruption of topography.

An Erosion Control Plan would be prepared for the project in accordance with Maryland Sediment Control Guidelines for State and Federal Projects (MDE 1990). No long-term impacts would be expected following revegetation of the project area.

4.7.2 Alternative 2

Impacts of implementing Alternative 2 on topography, geology, and soils are the same as those discussed for Alternative 1.

4.7.3 No Action

The No Action alternative would have no impact on geology, soils, or topography.

4.8 Water Resources

Implementation of any of the alternatives would have only minor, short-term impacts on water resources at Andrews AFB.

4.8.1 Groundwater

4.8.1.1 Alternative 1

Implementation of Alternative 1 would not result in long-term negative impacts to groundwater resources. The municipal groundwater supply provided to Andrews AFB would not be used for the security system installation, building renovations, forest clearing, or vegetation management operations. Excavation depths would be 2 feet for the fence installations and 3 feet for pole installations. These depths would not intersect the shallow groundwater table.

4.8.1.2 Alternative 2

Impacts of implementing Alternative 2 on groundwater are the same as those discussed for Alternative 1.

4.8.1.3 No Action

The No Action alternative would have no impact on groundwater resources at Andrews AFB.

4.8.2 Surface Water

4.8.2.1 Alternative 1

With the exception of the proposed installation of locking steel grates on existing culverts, no components of the proposed security system under Alternative 1 would affect surface waters. Installation of the steel grates will require a small amount of construction activity at outfalls and culverts on the base. The grates will be installed with minimal disturbance to the streambed and banks. Each of the streams and intermittent drainages are narrow headwater features with minimal flow. Considering the nature of these surface waters and the minor disturbances associated with installation of the grates, construction related impacts would be short-term and minor.

Small areas of soil would be temporarily exposed in proximity to surface waters during construction of a small portion on the northeast section of the perimeter fence and during installation of the utility poles in the north and south ends of the airfield. Routine sediment control practices prescribed by the MDE in the *Maryland Standards and Specifications for Soil Erosion and Sediment Control* (MDE 1994) would be implemented in these areas to prevent the introduction of sediment into any stream.

Implementation of Alternative 1 would not create any additional impervious surface areas, with the minor exception of the relatively small surface area associated with each of the new pedestrian and vehicle entry/exit gates; therefore, there would be no adverse impacts to surface water from storm water runoff.

4.8.2.2 Alternative 2

Surface water impacts resulting from implementation of Alternative 2 would be the same as those described for Alternative 1.

4.8.2.3 No Action

Under the No Action alternative, there would be no impacts to water resources at Andrews AFB.

4.8.3 Wetlands

4.8.3.1 Alternative 1

No components of the proposed security system under Alternative 1 would be installed within jurisdictional wetlands. As discussed in Section 3.8.3, the approximately 0.35-acre forested area to be cleared has been determined to be a non-jurisdictional wetland based on its isolated position in the landscape. This area will continue to maintain wetland characteristics following the clearing, with the area dominated by herbaceous and shrubby vegetation.

4.8.3.2 Alternative 2

Wetland impacts resulting from Alternative 2 would be the same as those discussed for Alternative 1.

4.8.3.3 No Action

There would be no impacts to wetlands at Andrews AFB under the No Action alternative.

4.9 Biological Resources

Implementation of any of the alternatives would have only minor impacts on biological resources at Andrews AFB.

4.9.1 Vegetation

4.9.1.1 Alternative 1

Implementation of Alternative 1 would have a minor impact on vegetation at the base. Most of the various components of the proposed security system would be installed in developed grassy areas of the base or where no vegetation is present. Approximately 2,000 feet of the airfield perimeter fence and 18 utility pole plants would be installed in areas with maintained herbaceous vegetation. Up to 1 acre of this vegetation would be temporarily impacted during construction. All disturbed areas will be seeded following construction with approved seed mixtures to facilitate revegetation. Approximately 0.35-acre of forestland would be permanently removed from an isolated area of natural vegetation west of the runway. Considering the approximately 600 acres of forestland present on the base, removal of this forestland for the project is considered minor.

4.9.1.2 Alternative 2

Impacts to vegetation resulting from Alternative 2 would be the same as those discussed for Alternative 1.

4.9.1.3 No Action

There would be no impacts to vegetation at Andrews AFB under the No Action alternative.

4.9.2 Wildlife

4.9.2.1 Alternative 1

Since most of the construction activities proposed under Alternative 1 would occur in developed portions of the base where wildlife habitat is absent, wildlife impacts would be minor. Where construction activities occur in proximity to natural habitats (primarily utility pole and steel grate installations), some minimal disturbance to resident wildlife may occur. Mobile animals might relocate to nearby areas with similar habitat, while slow or sedentary animals (amphibians, lizards, and small mammals) could be taken during construction activities. Installation of the locking steel grates on the existing culverts are not likely to limit the movement of aquatic species within the watercourses, since each of the grates will be installed in headwater streams and drainages that primarily support small aquatic species.

4.9.2.2 Alternative 2

Implementation of Alternative 2 would result in similar wildlife impacts as those discussed for Alternative 1.

4.9.2.3 No Action

Implementation of the No Action alternative would have no effect on wildlife at the base.

4.9.3 Threatened and Endangered Species

None of the alternatives are likely to adversely affect Federally designated or State designated threatened or endangered species or critical habitats.

4.9.3.1 Alternative 1

The Federal/State threatened/endangered bald eagle was previously observed near Base Lake. However, as discussed in Section 3.9.3, no bald eagle nest sites were identified in proximity to the lake during field surveys and it was determined that the species is likely

an occasional transient visitor from the Chesapeake Bay or Potomac River. Construction activities within 1,500 feet of Base Lake will be limited to the installation of approximately 3 utility poles. No bald eagle habitat will be disturbed or removed as part of the construction. Based on the minimal construction activity proposed in the vicinity of Base Lake, the lack of habitat removal, and the transient nature of the bald eagle in the area, implementation of Alternative 1 would have no effect on the bald eagle.

Two protected plant species, sandplain gerardia and blunt-leaved gerardia, have previously been observed or are known to occur at separate sites within 1,000 feet of the airfield security system in the southeast portion of the base. Airfield perimeter fencing has previously been constructed in this area; therefore, proposed construction in the vicinity of the sites will be limited to the installation of approximately 5 utility poles. The utility poles in this area will be installed in maintained grassy habitats associated with the vegetation management corridor of the existing fenceline. Based on the minimal area that will be disturbed during construction, the maintained nature of the construction zone, and the distance from known locations where these species may occur, implementation of Alternative 1 would have no effect on any of the protected plant species.

4.9.3.2 Alternative 2

Alternative 2 would involve the same construction activities in the vicinity of potential threatened and endangered species habitats as described for Alternative 1. Therefore, implementation of Alternative 2 would have no effect on any threatened or endangered species.

4.9.3.3 No Action

The No Action alternative would have no effect on threatened and endangered species.

4.10 Cultural Resources

4.10.1 Alternative 1

The only archeological resource considered eligible for the NRHP on base is the Belle Chance Plantation site (18PR447). Belle Chance is outside the area of impact for the security system upgrades. Consequently, implementation of Alternative 1 would have no effect on any historic or cultural resources.

There is a possibility that, during ground-disturbing activities, a currently buried and unknown archeological resource (historic or prehistoric) may be uncovered. In accordance with the Programmatic Agreement between Andrews AFB, the Advisory Council on Historic Preservation, and the Maryland Historical Trust (MHT), should any archeological resources be encountered during the proposed action activities, the

Andrews AFB cultural resources manager and the MHT would be notified. This would ensure compliance with 36 CFR, Part 800.11. Suspension of construction work then would be required until a qualified archeologist could determine the significance of the encountered resource(s).

4.10.2 Alternative 2

The potential impacts to historic or cultural resources, known and unknown, resulting from Alternative 2 would be the same as those described for Alternative 1. Specifically, implementation of Alternative 2 would have no effect on historic or cultural resources.

4.10.3 No Action

The No Action alternative would result in no change to historic or cultural resources, known and unknown, at Andrews AFB.

4.11 Cumulative Impacts

The CEQ regulations for implementing NEPA define cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what other agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7).

The scope of the cumulative impacts would be limited to the perimeter of the airfield at Andrews Air Force Base. This project is expected to take place over an approximate 12-month period. Overall, the analysis for this EA indicates that the proposed security system installation described in Alternatives 1 or 2 would not result in, or contribute to, significant cumulative impacts to the environment. While there are a few minor effects that would be associated with the proposed action, the implementation of the identified environmental controls would reduce their level of impact and, thus, reduce any contribution those effects may have made to a cumulative impact. The activities proposed in Alternatives 1 or 2 would provide increased surveillance and detection at Andrews AFB and would help establish a pilot program for these types of security upgrades at other Air Force bases.

4.12 Unavoidable Adverse Impacts

Unavoidable short-term adverse impacts associated with implementation of Alternatives 1 or 2 would include: temporary disturbance to soils from erosion and sedimentation, and

temporary increase in fugitive dust and air emissions during construction. However, these short-term effects are considered minor and would be confined to the immediate area. The environmental controls that would be implemented as part of the Alternatives 1 or 2 would minimize these potential impacts.

4.13 Relationship Between Short-Term Uses and Enhancement of Long-Term Productivity

The relationship between short-term uses and enhancement of long-term productivity from implementation of the proposed action is evaluated from the standpoint of short-term effects and long-term effects. Short-term effects would be those associated with the security system installation and vegetation management operations. The proposed action represents an enhancement of long-term productivity for security operations at Andrews AFB.

4.14 Irreversible and Irretrievable Commitment of Resources

This EA identifies any irreversible and irretrievable commitments of resources that would be involved in the proposed action if implemented. An irreversible effect results from the use or destruction of resources (e.g., energy) that cannot be replaced within a reasonable time. An irretrievable effect results from loss of resources (e.g., endangered species) that cannot be restored as a result of the proposed action.

Only short-term irreversible commitments of resources would occur when implementing Alternative 1 or 2. These include planning and engineering costs, building materials and supplies and their cost, use of energy resources during construction, labor, generation of fugitive dust emissions, and creation of temporary construction noise. Irretrievable commitments of resources are those resources that would be lost for the life of the system. These resources are limited to the minor loss of forested area to be cleared in Alternatives 1 or 2.

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